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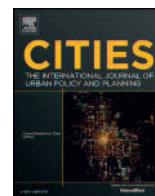
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The implications of condominium neighbourhoods for long-term urban revitalisation

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ABSTRACT

Condominium neighbourhoods are emerging in intensifying city centres as a response to market and demographic preferences for homeownership. While the multi-ownership structure of individual condominium buildings accommodates a short-term demand, the long-term implications for neighbourhoods is a source of concern. In particular, the presence of unit owners with varied acquisition objectives can lead to an anticommons problem resulting in building disinvestment due to an inability to reach decisions on sustainable maintenance fees and capital reserve funds, and a lack of end of lifecycle planning. The City of Toronto is experiencing unprecedented condominium development and serves as the basis for a case study that assesses the anticipated future neighbourhood challenges associated with a predominantly condominium-based form of ownership. Twenty-two local stakeholders were interviewed to identify problems that are viewed as sources of concern due to decisions made during the early stages of a building's lifecycle and the absence of a neighbourhood planning strategy. An analysis of the results indicates that lock-in, lacunae and neighbourhood effects will likely complicate revitalisation efforts as condominium neighbourhoods become more prevalent. Limited stakeholder recognition further suggests that it is necessary to raise a greater awareness of the potential anticommons impediments to long-term collective revitalisation actions.

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1. Introduction

"So here is a building that over the years has just turned into a student ghetto with lots of investors. The condo board is dominated by investors so when they put their hand up to fix the pool no one wants to do it. So finally the city [of Toronto] issued orders to get some of the stuff done. Their parking lot was uninhabitable, so they closed it. It caused a huge problem with some of the end users and it doesn't really matter but the long and short of the story is that a receiver moved in to manage the condo corporation The problem is that in this complex you have over 1,000 units, it's huge, and it is long and broad and eight storeys high. Then you have the widest range of owners you could imagine, we got to tour some of these units. From the outside it looks like a ghetto but you go through some of these units and some of them are absolutely stunning. People have put their life's work into it and then you go through another one and it is a complete ghetto. So you have these people who say 'no I'm not moving' and 'I am not selling'. In this case it is like 25%

of the people, so now you have a stalemate. Where it goes I don't know, I really don't know." (Interviewee, Planner B)

Private property-led revitalisation has been a key component of urban redevelopment strategies in a wide range of global cities over the past twenty years (Butler, 2007; Pow, 2011). This trend is characterised by a shift in residential construction from outer periphery, suburban and rural housing towards the centre of cities, particularly in North America (Ford, 1994; Nelson, 2009; Lehrer, Keil, & Kipfer, 2010; Scott, 2011). Due in part to land supply and demand factors, housing affordability in many global urban areas has declined sharply during this period – particularly for detached or freehold homes (Davidson & Lees, 2005; Addison, Zhang, & Coomes, 2013). Yet the desire for home ownership and its perceived investment benefits remains a strong source of demand in many of these locations. As a result, condominium ownership – also known as strata title in many jurisdictions – has been utilised to provide ownership options that also stimulate residential investment in urban areas (Harris, 2011).

While often referred to as a style of building, condominium is broadly defined in a legal context as the fee simple ownership of an individual dwelling in a multi-unit structure that includes joint-ownership of an undivided interest in the associated land and facilities held in common. High-rise condominium developments that have come to dominate

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new private sector construction in the urban core serve as the focus of this research.

Condominiums were introduced to North America in the 1960s, however the implications of multi-owned developments on urban neighbourhood demographics and the quality of the built environment remains unclear (Dredge & Coiacetto, 2011). Rosen and Walks (2013, p. 161) argue that 'condo-ism' represents a new approach "in which development agendas, financial structures, urban policies, and lifestyles all converge and are dependent on the continued spatial restructuring of the city through urban intensification". This convergence of processes and urban intensification has potential long-term ramifications for cities as 'condominium neighbourhoods' emerge in areas where property revolves not around individually owned parcels of land or corporately owned apartment buildings, but rather multiple unit owners subdivided vertically, all living within a shared building that defines their immediate community.

In Canada, the rise in urban condominium construction is largely associated with demand from three submarkets; older 'empty nesters' downsizing to smaller, lower maintenance housing; younger adults and newly formed households seeking to get on the property ladder; and millennials attracted by the availability of urban amenities and access to centralised employment opportunities (Hulchanski, 1988; Skaburskis, 1988; Rosen & Walks, 2013). In Canada's largest city, Toronto, condominiums have become a ubiquitous feature, with 130 high-rise buildings having been under construction in 2014 alone, 92% of which were residential (Emporis, 2014). Condominium ownership in the City of Toronto rose from just 6% in 1981 to 23% in 2011 (Statistics Canada, 2011). From 2006 to 2015 there have been approximately 300,000 condominium units built in a city of 2.6 million people. The unprecedented rate and intensity of downtown Toronto condominium growth is of particular interest because of the challenges associated with this type of development on anticipated neighbourhood regeneration efforts.

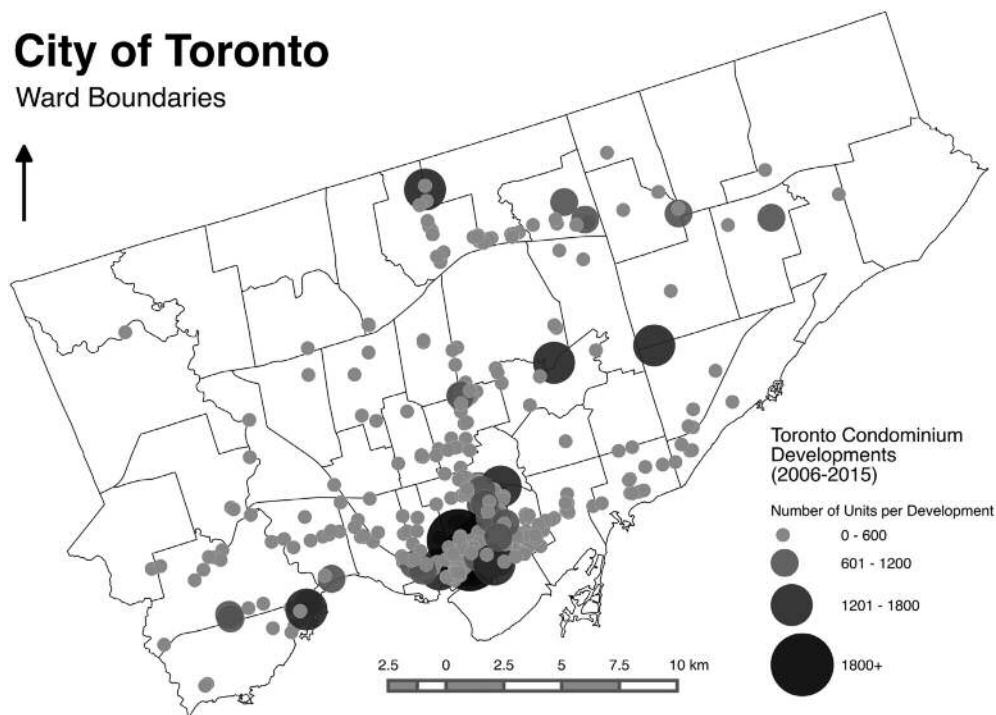
In their early incarnations condominium neighbourhoods typically act as catalysts for gentrification and renewal by appealing to the life-style preferences of middle-class homeowners (Brueckner & Rosenthal, 2005; Skaburskis, 2010; Davidson & Lees, 2005). Yet

questions remain about the long-term stability of these neighbourhoods and the adaptability of this ownership structure to future challenges, especially when consideration is given to building lifecycle issues (Easthope et al., 2014). The novelty and lack of maturity of condominium neighbourhoods as a distinct type of development is a point that Harris (2011, 721) emphasises in his concluding discussion on the impact of condominiums in Vancouver, noting:

"...perhaps it is the newness of the legal form and the fact that the buildings constructed around it are also new, or newly renovated, that has led many to associate condominium with gentrification. As the buildings age, the luster of many will fade, and the extent of renovation or rebuilding rather than the form of ownership will define the character of neighborhoods".

Just as condominiums are seen as a way to regenerate urban cores, provide differentiated housing options, and attract the middle-classes, the landscape of these neighbourhoods may themselves be in need of substantial renewal leading to a range of social, economic, and built environment concerns.

Dredge and Coiacetto (2011) argue there is a need for studies that examine condominiums at the neighbourhood scale and assess their wider socio-economic implications. The following research addresses this gap by taking the neighbourhood as the key scale from which to explore the interaction between condominium ownership, property development, and public planning objectives. It opens by discussing the rise and eventual revitalisation of condominium neighbourhoods from an international perspective, drawing out key drivers and the reasons why these aging locales eventually required collective urban revitalisation responses. It then goes on to conceptualise the dynamics within these condominium neighbourhoods as a tragedy of the anticommons problem, proposing that as they progress through their lifecycle a range of effects exponentially increase, potentially complicating solutions to the anticommons problem and urban revitalisation. Next, condominium development in the City of Toronto, Canada serves as the basis for a case study examining the future implications of this



Map 1. Number of units per development by condominium development (January 2006 to July 2015, including under construction and proposed) in Toronto. Source: urbanToronto (2015). Map contains ward boundary information licensed under the Open Government Licence - Toronto.

new form of residential ownership. This is contextualised and empirically tested by drawing on 22 in-depth interviews lasting approximately an hour each with government officials, financial experts, developers, planning and built environment policymakers and practitioners to explore condominium neighbourhoods at the early stages of their lifecycle, identifying key long-term concerns and assessing awareness of potential future issues. The paper concludes by pressing for raised awareness of the long-term ramifications of condominium neighbourhood development as a distinct urban policy concern.

2. Condominium neighbourhood revitalisation

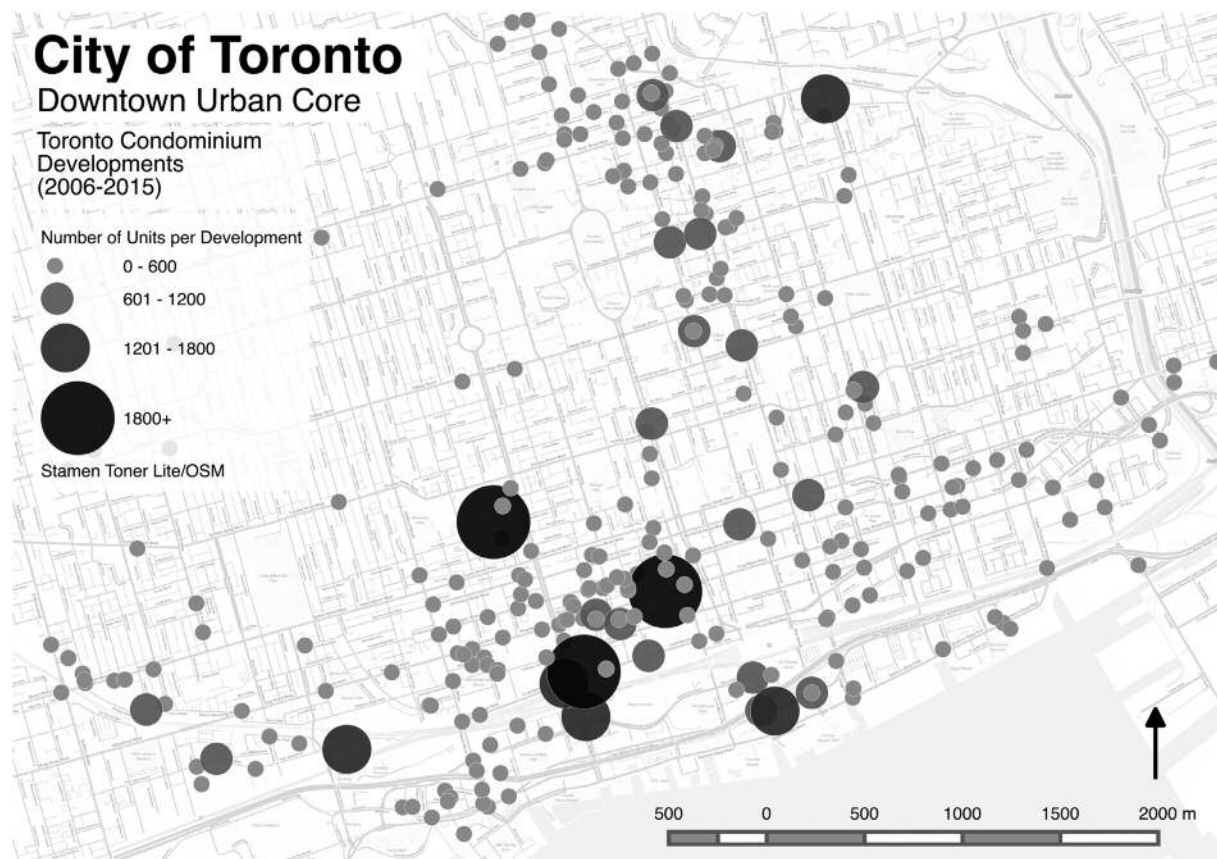
Jurisdictions around the world are beginning to struggle with the need to revitalise mature condominium neighbourhoods. As [Harris and Gilewicz \(2015, p. 265\)](#) have observed:

Most of the common-law world introduced condominium legislation in the 1960s, and title holders within condominium buildings, particularly those constructed in the early decades of the statutory schemes, increasingly confront significant renovation expenses. Moreover, escalating land prices and, in some cases, changes to municipal zoning or development regimes create pressure to redevelop land.

In Hong Kong the emergence of large-scale private developers in the 1980s led to a push for the comprehensive redevelopment of multi-owner residential high-rise neighbourhoods that were in poor condition but located in prime real estate locations. Many of these redevelopment initiatives encountered difficulties with land assembly because individual units needed to be acquired prior to development taking place. These efforts were further complicated by an abundance of

absentee owners and undocumented inheritance of properties leading to land assembly issues ([Gar-On Yeh, 1990](#); [Ng, 2002](#); [Yau & Chan, 2008](#)). To solve this problem, government backed 'Land Development Corporations' were ultimately created to consolidate land for private purposes if after twelve months owners and tenants declined a 'reasonable' offer. The high-rise nature of most multi-owned complexes in Hong Kong has resulted in continued urban revitalisation efforts due to recognition of not only the visual deterioration that eventually emerges as these structures age, but also the ever present health and safety issues that high-rise developments pose to residents and those surrounding the buildings ([Yau & Chan, 2008](#); [Ho, Yau, Poon, & Liusman, 2012](#)). Similar high-rise deterioration has occurred in South Korea, requiring a reactive policy response in order to better facilitate urban revitalisation ([Kim, Brand, Lee, & Park, 2013](#)).

In Singapore, site amalgamation attempts in areas of high development potential encountered a similar lack of consensus amongst property owners in multi-storey neighbourhoods. Rather than legally enforce land assembly when consensus failed, the government altered the legislation governing condominium buildings to allow the sale of a building that is more than 10 years old with the agreement of 80% of units rather than the 100% that was previously required ([Sim, Lum, & Malone-Lee, 2002](#)). [Sim et al. \(2002\)](#) argue that this change has been largely successful in encouraging redevelopment however it raises concerns about property rights infringement for a minority of unit owners ([Christudason, 2009](#); [Troy, Easthope, Randolph, & Pinnegar, 2016](#)). New South Wales in Australia is currently following Singapore's lead by initiating changes in legislation to allow full building sale based on a 75% owner majority decision ([NSW Government, 2016](#)). Legislation is being driven by two main factors; decades old buildings becoming



Map 2. Number of units per development by condominium development (January 2006 to July 2015, including under construction and proposed) in Downtown Toronto. Source: [urbanToronto \(2015\)](#). Map contains Stamen Design with data from OpenStreetMaps.

rundown and in need of comprehensive revitalisation, and the under-utilisation of high value land where buildings were developed at what are now considered to be low densities (Easthope, Hudson, & Randolph, 2013).

North of New South Wales, Queensland's Gold Coast is also struggling with the management of condominium neighbourhoods due to its focus as a major tourist destination. Age is a particular concern in this case, as over 50% of the condominiums on the Gold Coast are now over 30 years old, leading Warnken et al. (2003; 160) to argue that “if rejuvenation efforts are not successfully undertaken in the future, the image of the Gold Coast will increasingly become that of an outdated, deteriorating and unattractive destination”. In this case it is the larger condominium neighbourhood and the areas attractiveness as a destination by short-term renters, rather than the underutilisation of land, that is the chief cause for concern. Individuals who bought units as investments are struggling amongst themselves and with owner-occupiers to agree on the appropriate amount of maintenance and associated costs. Other condominium neighbourhoods have not yet reached maturity but are also experiencing friction between owners, investors, and government condominium policies as strengthening rental markets drive condominium conversions. For example, property companies in Chicago are increasingly looking to purchase the totality of condominium units in a building in order to convert them to rental apartment units (Gallun, 2015).

Two key drivers of condominium neighbourhood revitalisation can be drawn out from the preceding discussion. First, the long maturation process often means that gentrification activity could be negated by future concerns emerging over poor building maintenance. This is especially acute when neighbouring condominiums of a similar age simultaneously reach obsolescence. Secondly, under-utilisation of land is often a key economic driver for the revitalisation of condominium neighbourhoods based on shifts defining new highest and best uses for these locations. Linked to this, market drivers also involve changes in preferences for the type of housing as rental and ownership demand ebbs and flows over the decades (Steele, 1993; Hirayama, 2005). This leads to questions about the ability of condominium neighbourhoods to appropriately adjust to change given their built form and the complex legal ownership framework (Johnston & Reid, 2013; Harris & Gilewicz, 2015), giving rise to a tragedy of the anticommons problem and the need to more specifically problematize the lifecycle of condominium neighbourhoods.

3. Condominiums as a tragedy of the anticommons problem

The tragedy of the commons, the term coined by Garrett Hardin (1968) explains how perceived reasonable individual actions, such as fishing, can collectively lead to overuse of a scarce resource. In this way the commons are defined by free access and a lack of exclusionary rights (Michelman, 1982). Typically three approaches are called upon to manage the commons problem: privatisation, through the splitting of the commons into private property to encourage individual management and rationing of the resource; regulation, through the introduction and enforcement of rules over the use of the commons to compel rationing; or cooperation, through non-enforced consensus management of the resource for mutual benefit (Heller, 2013).

Legislation governing condominiums typically ensures the tragedy of the commons is largely avoided through a nomocratic planning approach (Moroni, 2015; Slaev, 2016), first through the distribution of the majority of the structure amongst multiple private owners thereby reducing the amount of common access and use within the overall structure, second through legal mechanisms to enforce rules on common areas and finance, and third through the establishment of a condominium board for management purposes and as a forum for collective decision-making. Yet while each of these may be seen as a solution, they must also confront the potential tragedy of the anticommons. The tragedy of the anticommons is typically defined not by overuse

but rather underuse of a resource (in this case the entirety of the condominium building or the land it sits on) as individual owners exercise a right of exclusion in relation to the use or sale of commonly owned elements over other titleholders, thereby preventing the dissolution of the condominium. As Harris and Gilewicz (2015, p. 265) explain:

Perhaps the single most important decision in the lifecycle of a condominium is the one to dissolve it... Title holders pursue dissolution to maximize the exchange value of the assets formerly within the legal form. Most commonly, this is the result of the gains to be had from redeveloping land, the need for extensive renovation of the common property, or some combination of the two.

Within condominiums the common elements are jointly owned and therefore owners must collectively agree to sell the entire building, however some owners may not wish to and as a result prevent others from doing so. When multiple owners have the right to exclude others from the use of a scarce resource and no individual owner is privileged with the exclusive right of use then a tragedy of the anticommons can occur (Heller, 1998). Collective decision-making and coordination is therefore required to ensure all owners agree to the use of the resource. More widely, “though the anticommons concept refers at its core to fragmented ownership, the idea extends to fragmented decision-making more generally” (Heller, 2013, p. 12). Broadly jurisdictions have sought to address this issue by legislating dissolution of condominium corporations in two ways (Harris & Gilewicz, 2015). The first, and least utilised, is the unanimity rule where unanimous consent of all owners is required in order for the condominium corporation to be dissolved. The second is more widely used and requires a supermajority, usually 75–80% of owners to agree to the sale thereby preventing a few owners from preventing the sale of the entire structure. In the Province of Ontario, where Toronto is located, the threshold is set at 80%. In both cases it is possible for court intervention to also be employed to force dissolution if certain conditions are met.

The use of the anticommons as a conceptual framework has been of particular value to a number of authors interested in the dynamics of the real estate market, often framing problems as land assembly issues resulting in higher transaction costs (Fennell, 2009). The concept has also been used in a limited fashion to discuss the dynamics of condominium ownership, driven by the idea that “property becomes entrenched as an anticommons: rights of exclusion become distributed among so many owners that it becomes too difficult to agree to develop the property at a higher use” (West & Morris, 2003, p. 904). While the neoclassical optimal redevelopment rule assumes that rational owners will agree to sell their property when the price of land for a higher and better use exceeds the price for the current use, this often does not occur due to differences in owner behaviour (Rosenthal & Helsley, 1994; Adams, Disberry, Hutchison, & Munjoma, 2001; Harris & Gilewicz, 2015). Strategic holdout behaviour becomes common in these situations, as there are no perfect substitutes, projection of future value is difficult, and the general lifespan of buildings is long, making miscalculations in behaviour more common and costly (Schulz, Parisi, & Depoorter, 2002). The tragedy of the anticommons complicates this process in condominiums when a majority of owners may wish to sell their titles but a dissenting minority with exclusionary rights may not

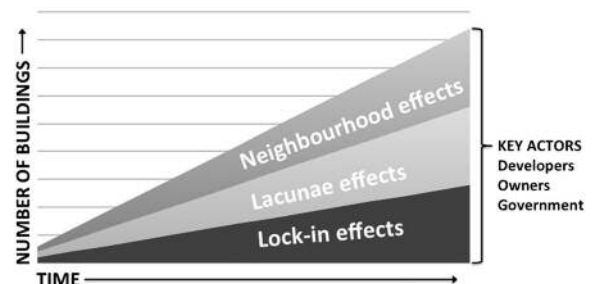


Fig. 1. Basic anticommons condominium neighbourhood problem.

wish to sell and thereby successfully block a transaction because a super-majority may be required to transfer ownership of an entire condominium building (Harris & Gilewicz, 2015).

In recent decades this has been manifested in the refusal of certain condominium unit owners to sell their property when it reaches obsolescence (Easthope et al., 2013), neighbourhood revitalisation is proposed (Warnken et al., 2003; Gar-On Yeh, 1990; Lum, Sim, & Malone-Lee, 2004) or when natural disasters cause costly structural damage (West & Morris, 2003). The reasons behind the utilisation of exclusionary rights by an owner may vary (Sim et al., 2002, p. 460):

In the anticommons regime, exclusion rights may be assigned to persons who cannot, or may not desire to, capture directly pecuniary gains. Conflicts may arise among excluders who may have different objectives for facility development. Moreover, there may be owners who are not interested in compensations.

From a condominium neighbourhood revitalisation perspective, the tragedy of the anticommons can be characterised as a 'vertical property assembly problem'. Past discussions of urban redevelopment land assembly have been largely focused on surmounting a limited number of individual ownership constraints to assemble land for neighbourhood revitalisation schemes (see Adams et al., 2001 for a discussion on the general nature of ownership constraints). However, condominium neighbourhoods require the reconciliation of multiple property ownership constraints in a single building in order to obtain a singular parcel of land which is coupled with the additional burden of resolving those same constraints in numerous other surrounding condominium buildings that make up the wider neighbourhood.

As condominium neighbourhoods age the tragedy of the anticommons potentially becomes more complex to resolve and more prevalent over time until it reaches a breaking point, when age, land values, or other revitalization drivers results in the need to collectively sell all the units in a condominium or redevelop, at which point key stakeholders must either cooperatively resolve the problem or have a solution imposed on them. The following draws on Toronto, Canada to explore the basis for this assertion by elaborating on the origins of the noted effects, and reflecting on the future of condominium neighbourhoods by examining the potential roles of the key stakeholders as structures age.

4. Condominiums in Toronto, Ontario, Canada

Condominium ownership structure is relatively new to Ontario, Canada's most populous province. The first *Condominium Act* was introduced by the province of Ontario in 1968 as a response to changing demographics and a need to regulate a fledgling industry (Hulchanski, 1988; McLaughlin, 1982). To date only a handful of condominium corporations have been dissolved in the province, the most recent being in 2014 (Ontario Supreme Court of Justice, 2014). However with an estimated 10,000 condominium corporations having been created since the Condominium Act was first introduced there is potential for such dissolutions to become more common. Despite a 1998 update, the inability of the ill-equipped legislation to respond to the most recent condominium boom led to a provincial review in 2012, the results of which were announced in a new Act in June 2015. Developer and consumer consultations resulted in an emphasis on five concerns; governance by condominium boards of directors, a more responsive and independent dispute resolution system, greater transparency of condominium building finances, increased consumer protection when purchasing a condominium, and improved training for condominium management firms and managers (Public Policy Forum, 2013). End of life and building sale were not flagged as key concerns in the consultation documents, although condominium conversions to rental units was highlighted as a potential issue.

The changes to the Act are a direct response to the significant growth in the share of condominium ownership in Ontario, and particularly the City of Toronto. Between 2010 and 2014, condominiums comprised 80%

of new residential development in the city, the highest level recorded for a 5-year period. In contrast, 20% of residential units were built as condominiums in the lower density suburban portions of the Greater Toronto Area (City of Toronto, 2015a). In fact, the role of condominiums in Toronto's intensification is apparent as 40.4% of proposed units were located in the Downtown and Central Waterfront between 2010 and 2014, which was the highest concentration in any district in the city (City of Toronto, 2015a) (see Map 1). This concentration results in large portions of urban neighbourhoods being composed of condominium ownership rather than traditional single-unit ownership or purpose-built rental apartments.

The physical characteristics of downtown condominiums have changed in response to residential market conditions. One notable trend is the increased heights of these structures. Between 2003 and 2007, 57% of the condominium development applications were 12 storeys or less while 22% were 30 storeys or more, while 2008 to 2013 had 36% of projects at 12 storeys or less, 35% exceeded 30 storeys and 11% were higher than 50 storeys (Ostler, 2014). The city linked a continued decline in the size of individual downtown condominium units to worries over the emergence of an increasingly homogenous single person/couple demographic and lack of housing opportunities for families. These concerns were initially politically voiced by a city councillor and subsequently addressed through the provision of city development incentives and imposition of regulations resulting in approximately 33% of proposed units built between 2008 and 2013 having 2 and 3 bedrooms (Yelaja, 2012). However, single person households totalled 54% in the downtown in 2011 in comparison to 32% for the entire city and multi-person non-family households were double the Toronto rate (Ostler, 2014), indicating that the downtown remains the preferred location for unattached residents. This demand, combined with provincial legislation supportive of urban intensification, has led to condominium construction across the entire city, with particular neighbourhoods in the downtown core being largely condo-ised (see Map 2). In 2011 the tenure split for downtown condominiums was 60% owner-occupied and 40% rented which differed from overall downtown housing that is 65% rented and 35% owner-occupied (Ostler, 2014).

Population growth in downtown Toronto is a function of the condominium market and demonstrates the prominence of the core in the city's ongoing development. Between 2006 and 2011 the downtown population increased by 18.0% versus the city's 4.5% rate. Stated another way, there was a 111,779 population increase in the City of Toronto between 2006 and 2011, with 30,373 moving into the downtown. Thus 27.1% of the city's population growth took place in downtown condominium neighbourhoods (Ostler, 2014).

5. Anticommons problems and their long-term effects on condominium neighbourhoods

The recent concentration of condominium construction in Toronto has resulted in condominium neighbourhoods emerging throughout the downtown core. To understand the potential long-term implications of downtown Toronto condominium construction, the lifecycle of condominiums must be examined individually as buildings and collectively as a neighbourhood within the context of the anticommons problem. In discussing multi-owned developments, such as condominiums, Johnston and Reid (2013) have developed a lifecycle model comprised of three broad stages; the beginning phase includes the planning, promotion and sales, construction, and transition from developer ownership to individual ownership, while the middle of life phase is concerned with occupation, followed by end of life when the structure and common facilities decay beyond reasonable use resulting in either demolition or substantial rejuvenation.

The lifecycle model also incorporates the actors involved, namely the government (predominantly in the form of local planning), financiers and developers (including construction, marketing, etc.), and owners (including residential occupants and investors). The anticommons

problem becomes more apparent as the lifecycle of a condominium building progresses towards demolition or renewal, as the decisions made (or not made) by the range of actors involved as far back as the beginning phase progressively compounds the complexity of the problem. This is further complicated at the condominium neighbourhood scale where the concentration of this form of ownership can potentially amplify the anticommons problem, resulting in a range of externalities. Based on interviews in Toronto with the key actors identified, the long-term impact of decisions can be broadly classified into lock-in, lacunae, and neighbourhood effects.

5.1. Lock-in effects

The planning, design, and construction of high-rise condominiums and their surroundings have long-term impacts on the future quality, adaptability, and marketability of condominium neighbourhoods. These lock-in effects are often set at the beginning of the lifecycle, however the impacts are typically not noticeable until decades later. Interviewees expressed particular concern about the focus on current demand for studio and one-bedroom units, the overall quality of construction, and what this might mean in the future. One financial expert noted this in the context of future demand and resale value:

“There are too many small units. I do wonder about the long term. Demand is currently strong, but what is the longer-term demand for these types of units. I worry about the quality of them.” (Interviewee, Financial Expert A)

Some developers interviewed attempted to address the issue of adaptability by constructing buildings with knock out walls between properties to allow the creation of larger units. Much of this has been the result of policy debates around the need to encourage more families to move and live in Toronto's downtown and diversify the demographics of the evolving condominium neighbourhoods.

“Let's say you have a two bedroom next to a studio. If they want to make it a three bedroom they could use a knock out panel and all that, so we are looking at that.” (Interviewee, Developer B)

Yet in practice, such an approach is problematic:

“If knock out panels are in place you can do it for the first purchase but then it is very tricky to find two units that are next to each other [for sale] in order to create that. We will allow some knock out panels but for the most part we want to see a minimum percentage of two or three bedrooms and that helps. Although some of the three bedrooms that we are seeing right now are smaller than the studio condo that I first purchased when I first made my own investment.” (Interviewee, Planner D)

Some interviewees argued that Toronto has large numbers of older residential high-rise buildings that are in good condition, so there is no reason to be concerned about possible building deterioration. Yet many of those are purpose-built rental buildings with a single commercial owner maintaining their investment over the long-term. Even with a single owner many of those older residential high-rise buildings are in fact deteriorating as indicated by the City of Toronto's Tower Neighbourhood Renewal Programme, which aims to revitalize inner suburban post-war rental apartment buildings (Poppe & Young, 2015). This is in contrast to multi-owned condominium developments where retrofit and investment decisions are divided amongst a wide range of owners with varying agendas rather than a single owner, further complicating potential revitalization efforts. One interviewee noted:

“The rental buildings were built far different than the condos because they are use to a flow through of tenants and so they use all these really durable materials from countertops to tiles. We hear a

bit that these condos are being built cheaply, the glass will only last 20 years and the elevators aren't the best, but this is just anecdotal.” (Interviewee, Planner C)

Condominiums built in Toronto during the initial 1980s boom are still in relatively good condition, having not surpassed the standard 50-year life span, largely because these early structures relied on different construction techniques compared to modern developments. Older condominiums were geared towards wealthier empty-nesters and utilised high-end masonry, were built with poured concrete walls throughout due to units being stack designed identically one above the other, and included steel frames to support windows. In contrast modern condominiums in Toronto are often targeted towards first-time homebuyers, this consequently leads to less expensive materials being used and a focus on maximization of space. This results in differing unit layouts on each floor leading to fewer poured concrete sections between units, and an increasing reliance on outer window-wall systems (Sanati, 2016).

Several interviewees expressed concerns with the use of window-wall systems in current condominiums. Window-wall systems are faster and less costly to install than steel frame, curtain walls, or many other window systems because they are inserted between the concrete slabs of a unit and sealed using caulking and taping to stop moisture forming in the structure (Persaud & Ramadhin, 2011). Installation involves a large numbers of joints, increasing the chance of failure, while the caulking and tape can crack and dry out, risking water damage and potentially the need to reseal the entire structure. As one interviewee worried:

“I think the whole window wall issue is going to break down ... it is all performance based on just getting the windows done. So I don't know, it looks pretty but architects in here talk to me and they say, you know these window walls, these kids are going to bounce into them. If somebody hits a window wall at the bottom and cracks the caulking all of a sudden the structural integrity goes boom ... I think there will be huge issues and I think there could be problems in the market.” (Interviewee, Planner B)

Anecdotal interview comments made by planners highlight a slight ambivalence about the long-term building and neighbourhood impacts as well as the broader public and private financial implications that could arise. One planner remarked:

“Time will tell. Some of these things have been put together pretty quick.” (Interviewee, Planner A)

Developers defended their condominium construction practices. Their responses were largely framed around addressing current market demand, competing with other developers, and adhering to planning restrictions. Long-term consequences were not often considered, however one well-known developer did express concerns about the impact of poor building quality on their reputation and brand. They highlighted that within such a strong housing market, trade and labour shortages may lead to poor build quality:

“I think that the market is very driven by the moment, so there is a desire to build good buildings but because there is such a rush to get these things built the bigger issue affecting it rather than strategic planning in terms of how you approach construction, is getting good trades and labour shortages.” (Interviewee, Developer D)

When discussing building quality and market demand, one developer's view stood in contrast to a strategic planning official, noting:

“We have got media reports to say builders build with a lot of glass because they are cheap and glass is cheap, well it is not cheap and we use a lot of glass because people like glass, they like a nice view,

they want to feel the space.” (*Interviewee, Developer A*)

“Which you know will not last 50 years and will present incredible energy loss issues in the future. Issues for the condominium corporations I suppose.” (*Interviewee, Planner E*).

A provincial government official suggested that condominiums will need to accumulate substantial reserves to be prepared for massive structural failures based on construction quality, however he noted that condominium boards responsible for these decisions have a great deal of discretion over how they manage their maintenance fees and capital reserve funds for building repair and investment. The official went on to note that there are concerns that in the long-term the government may have to provide financial support if these issues are not adequately addressed, potentially placing a significant burden on public finances and raising questions about government and its role in aiding private owners for the failure of past decisions.

5.2. *Lacunae effects*

As condominium developments move from the beginning of their lifecycle to the middle, ownership is passed from developer to individual unit owners. Part of this process involves establishing a mandated condominium board to manage the building. Maintenance fees based on the square footage of each unit are set to pay for the daily costs of maintaining the public areas and establishment of the reserve fund. Decisions about repairs or capital investments are made at condominium board meetings, where a defined quorum of owners must be present.

Toronto condominiums are on average more affordable than single-family homes and often act as a form of entry-level housing ownership or as investment units for the rental market rather than a deliberate choice to become a member of a condominium community (CMHC, 2016). Yet a contrast exists between strong engagement by some owners in the building and apathy from others who are not interested in the management of the building, and by extension their investment, leading to a potential gap in condominium governance:

“Some people who live in my building should not be condominium owners because it is all about them and not about a collective and you know if you are in a condominium there are 100, 200 people whatever it is, you have to make compromises right? But oh no some of these people are, I don’t want this, I don’t want this, I don’t want this, and this colour has to be in blah, blah, blah. It is a mixed bag and it is not for everybody - there is no question.” (*Interviewee, Condominium Owner A*)

“More commonly people are apathetic from a governance perspective, condo owners and buyers under-estimate the extent they need to engage with the building.” (*Interviewee, Planner F*)

Apathy was acknowledged by a number of interviewees as an obstacle for obtaining the required quorum for making critical decisions regarding maintenance fees collected for the daily operation of public areas and the reserve fund for capital repairs and anticipated investments in the building. Additionally, it was suggested that participation levels are influenced by the proportion of owner-occupiers in a building compared to those that are renters. They noted that investors who lease out their units often do not live in the building, or even the city, and therefore rarely attend condominium board meetings. This has particular implications for certain buildings that were primarily marketed towards investors at the beginning stage of the development’s lifecycle, especially in the long-term:

“The other big question is what happens when these investors who have bought floors and floors of buildings decide that Toronto is not the market that they want to be in anymore, would they just walk away? Will they stop participating in the condo board? If they are offshore, how are you going to get back at them to engage?” (*Interviewee, Planner B*)

This creates a form of condominium absentee owner, whose decisions (or lack thereof) not only impacts their investment but also affects the investment value of all the other unit owners in the building. Lippert (2012, p. 268) presented findings that reinforced the argument that owner-occupiers have different priorities than investors who “seek to avoid increasing fees not only because they cannot access the services they allow, but also because the higher rents required to recover higher fees are thought to discourage renters from leasing before the investor is ready to sell for profit”. Furthermore, owner-occupiers who are not involved in the governance of the building may complicate decision-making by making quorum more difficult while those that do attend meetings are often viewed as obstructionist (Lippert & Steckle, 2016). Interviewees suggest that these two groups are also most likely to be more concerned with keeping maintenance fees low in the short-term rather than with other building aspects such as capital investments and repairs that directly impact unit values:

“We have done a reserve study for the next 10 years, we have to spend one million dollars every year on stuff that wears out and a lot of people I find, because I am on the board, on previous boards did not invest and they kept their fees at 0% or 1% and everybody was happy with that but then stuff goes wrong.” (*Interviewee, Condominium Owner A*)

Recently constructed buildings initially tend to collect lower maintenance fees because of the lack of need for repairs and as a marketing mechanism for developers. However as buildings age these fees often rise out of necessity to address increasing maintenance costs. Early resistance to funding preventative maintenance often leads to an excessive increase in fees when a major repair is necessary, creating a significant burden for owners:

“Maintenance fees are the mortgage you never pay off. Where you do get into challenges is when the maintenance fees are increasing at a rate that far exceeds the rate of inflation. Like the one year that we had a 10% increase in our maintenance fees ... a \$900 a month maintenance fee all of a sudden became \$1,000 a month, I said wait a second this is not sustainable, so it was a concern for me and we sold.” (*Interviewee, Condominium Owner C*)

“They do go up and in fact I know someone who bought into Radio City [condominium building] when it opened and now he is getting out because of the condo fees. It has been there 10 years but the condo fees just recently have gone through the roof.” (*Interviewee, Condominium Owner D*)

A number of interviewees expressed a general concern that those making decisions on condominium boards have no prior building management experience. This gap in knowledge potentially leads to mismanagement of the building and its assets, which has long-term implications for maintenance and associated fees. Others highlighted how condominium boards often hire property management companies, which themselves may not be professionally licensed:

“Sometimes what will happen there is that they will go cheap on the maintenance, the management company probably doesn’t do the maintenance or doesn’t know what they are doing, or the board doesn’t know what they are doing. So there is a whole sort of educa-

tion processes that needs to happen there that does not exist there now.” (Interviewee, Developer A)

New provincial legislation acknowledges this knowledge gap in the *Protecting Condominium Owners Act* by enacting a range of measures including establishing a ‘condo office’ to “oversee education, dispute resolution, condo manager licensing and to maintain a registry of all condos in the province” (Province of Ontario, 2016). The provincial government recognizes that condominium board decisions may result in reserve funds not being adequate to deal with future repairs while sudden increases in maintenance fees may be unaffordable for some unit owners. While such changes attempt to address problems with reserve funds there continue to be concerns about the available funds and the ability of condominium boards to manage long-term maintenance costs as a result of circumstances beyond their control:

“In 20 or 30 years it won't be, an elevator goes down, and then 10 years later the balconies need replacing, and then 10 years later you know something else structural comes along, it will happen all at once right? It is almost Murphy's Law. Are they set up to weather those kinds of shocks, and they are going to come, I think my fear is that the answer is no.” (Interviewee, Developer C)

Therefore condominium unit owners need to proactively identify the long-term impacts of their decisions to protect their investments. Apathy of owners and investors in terms of governance and management, along with a desire to defer maintenance and investment in favour of lower costs at the earlier stages of a condominium's lifecycle regardless of longer-term repercussions is identified as a key risk. Within the context of a condominium neighbourhood there are serious risks posed by the potential un-funded liabilities as buildings collectively reach maturity.

5.3. Neighbourhood effects

The emergence of condominium neighbourhoods in downtown Toronto within the last ten years has resulted in a range of impacts that stem from agglomeration effects. The planning of many of these neighbourhoods at the beginning of the lifecycle has often occurred based on poor condominium market assumptions. While developers and investors focused on individual buildings, planners interviewed discussed the need to reflect on the supposed self-contained nature of condominiums and how shifts in condominium design along with the attraction of particular demographics are impacting on the provision of neighbourhood amenities in Toronto:

“I think Liberty Village [condominium neighbourhood] is a disaster, there is literally no park there for a demographic that probably is the hungriest for park land out of all the demographics. I mean look at who is living there. There is a little postage stamp piece of grass that is the only place for all the poodles, it is a travesty” (Interviewee, Developer C)

Interviewees suggested that the rise of condominiums as investment units has resulted in increases in rental rather than owner-occupied tenure. This, along with the specific demographics that condominium neighbourhoods are attracting, requires a different understanding of how amenities are used and provided for, such as green space, sports facilities, and recreation spaces:

“The thinking originally of the condominium form is that those amenities are internalised in the complex, but I believe if you talk to some of the city planners is that over time that has not been as much the case - that has tended to shrink” (Interviewee, Planner E)

“Our buyers aren't looking for the types of amenities that are expensive to maintain ... they are not looking for the experience like the

mega pool and gyms they are buying access and a main street and a more boutique living.” (Interviewee, Developer D)

Planners at the City of Toronto have also attempted to direct condominium development towards predetermined sites. It was noted that these efforts often underestimated the appeal of existing neighbourhoods along with the ‘access’ and ‘boutique living’ noted in the earlier quote, assuming that development on brownfield sites or main streets further from the urban core would be more prevalent:

“Well the market seems to find interesting sites to redevelop ... the intensification within the city has not been on the sites that we thought. Increasingly there has been, oh another application on that site, oh I hadn't thought of that site, you know coming for a 40-storey tower. Then other areas where, you know back in 2000 we thought that the Port Lands [industrial harbour area] would be starting to develop now as a community and there is nothing happening there, some of the avenues that we designated [for intensification] there is nothing happening.” (Interviewee, Planner E)

Instead, condominium neighbourhood development has increasingly focused on sites in the urban core that provide easy access to a range of shops, restaurants, services, and amenities. Due to the prevalence of small lots on the main streets of Toronto, issues of fragmented ownership have arisen as the larger sites are developed. This creates a challenge for land assembly as property owners can block, or increase the cost of, condominium development:

“Certainly all the choice, easy, low hanging fruit particularly in the most desirable areas like Liberty Village or the Distillery District or some of the key intersections are probably long gone. So assembling parcels that would get you a big enough footprint to build something is probably more difficult.” (Interviewee, Planner C)

“I think you are now getting down to the sort of, I don't want to call it scraps because it is just harder to put together, but definitely there are more complicated assemblies involving multiple people, multiple interests and there is a lot of creativity that has to happen.” (Interviewee, Developer D).

While land assembly of small sites can increase the overall costs, this also suggests there will be fewer development opportunities in many of these in-demand neighbourhoods. At the moment the sites are assembled by a single owner, however redevelopment of these neighbourhoods will likely require engagement with condominium owners thereby adding further complications to land assembly. There is a danger therefore that many of these neighbourhoods may not be able to adapt to future conditions as land assembly becomes more difficult. Long-term urban revitalisation is therefore at risk as these neighbourhood effects place a greater burden on the very locations that have made condominium developments so successful in Toronto.

6. The implications of condominium neighbourhoods for long-term urban revitalisation

Rosen and Walks (2013) argue that the condominium development transforming neighbourhoods in cities such as Toronto is often predicated on a number of factors; urban intensification policies that have successfully proliferated as a result of demographic change, financial policies designed to encourage home ownership, and housing affordability. For many cities, these relatively new condominium neighbourhoods have uncertain long-term prospects because of a context shaped by the prevalent shared ownership structure. If not appropriately addressed, the lock-in, lacunae, and neighbourhood effects will potentially grow more complex over time because of the decisions

made by stakeholders that are expected to generate a more complicated anticommons problem due to agglomeration (Fig. 1).

6.1. Developers

The short-term market driven decisions made by developers and their financial backers have significant long-term lock-in effects. The typical focus on smaller units may address demographic and investor demand, however the fixed nature of these structures means there is a lack of flexibility to adapt to future market changes. This may lead to decline in demand and increased emphasis on a wider range of customers, such as investors rather than owner-occupiers in these neighbourhoods. This potentially complicates the anticommons problem as owners with more varied interests become involved in decision-making and capable of exercising rights of exclusion (West & Morris, 2003). In the rush to compete with other developers in the neighbourhood, build quality has been identified as a concern that can potentially lead to long-term structural issues and damage to area reputation. Easthope and Randolph (2016) have further highlighted the long-term impact of initial maintenance fee levies by developers. The marketing of condominiums to investors can also result in lacunae effects as the research highlights this leads to a preference for keeping maintenance fees low thereby complicating collective and co-ordinated decision-making necessary to resolve anticommons problems (Heller, 2013). The most prescient long-term condominium neighbourhood revitalisation issue for developers is however the increased number of property owners who may utilise strategic holdout behaviour when future action is necessary thereby increasing land assembly costs for future re-development within the neighbourhood (Schulz et al., 2002).

6.2. Owners

As condominium buildings deteriorate due to age or poor maintenance, the ownership structure should require unit owners to pay increased costs towards the upkeep of the common areas. Self-interest sometimes motivates owners to limit the burden of maintenance fees, however increases are expected to become necessary in response to the need to address critical capital repairs. The rate of these increases in many ways is a function of the quality of materials and labour used when the condominium was constructed, which the interviewees indicated is questionable. Eventually, neglect may result in a weak resale market as the individual upkeep costs becomes greater than the value placed on the private unit. Meanwhile costs continue to increase; maintenance suffers, with an increasing number of owners, and particularly investors, potentially abandoning their properties. As a result the remaining owners are left to deal with higher building repair costs. In response, the eventual redevelopment of the property could be difficult. For example, Ontario legislation gives a minority of owners (20%) the power to veto a sale. This can create tension between majority and minority property rights and epitomises the anticommons problem (Sim et al., 2002; Christudason, 2009; Troy et al., 2016). At the neighbourhood scale, condominiums built during a similar time period risk collectively suffering deterioration leading to urban decline (Warnken et al., 2003). If a stalemate occurs, such as that mentioned in the opening quote to this article, there may be a need for government intervention to resolve the problem and halt decline.

6.3. Government

Government sets the rules of the game throughout the life of condominiums. However, reactive planning decisions have tended to dominate and focus on single developments while only nominally acknowledging wider neighbourhood issues (Lippert & Steckle, 2016). As the past decade in Toronto suggests, the pressure to process a large number of condominium applications results in a lack of comprehensive

understanding of the collective neighbourhood impacts of the developments in the long-term (Warnken et al., 2003). At the local scale there is a need to reconsider condominium ownership assumptions, particularly in relation to the rise of investment/rental units and the expected diversity of unit sizes and types that are in demand. These trends could lead to a range of externalities, including the future shift away from the internalization of amenities in condominiums to reduce maintenance fees. Thus, legislative rules are necessary to ensure build quality and reserve funds are appropriate to reduce long-term capital costs and avoid artificially low maintenance fees. As buildings and neighbourhoods age it is also necessary for government to enact legislation to manage a collective sale or termination of the condominium structure to avoid the use of exclusionary rights to delay revitalization while also addressing the need to protect minority property rights.

7. Conclusions

The ownership structure of condominiums has the potential to be mired in an anticommons problem. In Toronto there is a poor awareness of this as a long-term issue by government, developers, lenders, and unit owners. This research has sought to engage a diverse range of stakeholders to understand the implications for condominium neighbourhoods and their potential for future urban revitalisation. Interviewees suggest a range of potential areas of concern in which anticommons problems may arise in Toronto, including the inadequate management of reserve funds for long-term building maintenance, the inadaptability of the structures themselves to respond to future demographic or cultural changes, and absentee investors potentially frustrating communal decision-making.

Of far greater importance is the long-term risk that strata ownership structure poses for redevelopment of urban condominium neighbourhoods built in the same time period and using similar construction methods. Many municipal and real estate stakeholders in Toronto seem unaware of the potential long-term consequences that present actions could have on future urban redevelopment. As condominium neighbourhoods develop and age, the tragedy of the anticommons becomes more complex due in part to the lock-in, lacunae, and neighbourhood effects noted in this research. This study begins to explore the dynamics of multi-owned developments at the neighbourhood scale. Other effects not identified through this research may also complicate long-term urban revitalisation of condominium neighbourhoods and need further study, such as the role of the developer in the management and sustained ownership of aspects of the buildings (Easthope & Randolph, 2016).

To date the jurisdictions responding to emerging condominium neighbourhood challenges have primarily adopted a reactive policy stance. Toronto, for example, has only recently initiated a process to address some of the deficiencies in condominium neighbourhoods through its TOCore study (City of Toronto, 2015b). This initiative is attempting to retroactively identify shortcomings resulting from a shortsighted planning process by providing amenities in these growing condominium neighbourhoods and develop strategies to make the urban core of the city more liveable.

A more proactive approach to addressing potential lock-in, lacunae and neighbourhood effects is necessary to ensure the long-term prosperity of condominium neighbourhoods. However, limited stakeholder recognition of these issues suggests that it is necessary to raise a greater awareness of the potential anticommons impediments to long-term collective revitalisation actions.

The results of this research suggest that rising land values, build quality, and demographic shifts could potentially place pressure on urban areas to strategically address condominium neighbourhood revitalisation. The Toronto case indicates that current legislation, developer practices, and condominium unit owner behaviour are expected to have long-term consequences for revitalising aging

neighbourhoods. In particular, the diversity of ownership interests suggest the emergence of future difficulties comparable to the fragmented decision making documented in Australia and South Korea that compromises the ability to undertake the collective action necessary to respond to rapid building and neighbourhood deterioration. Most notably future efforts could be complicated by the type of land assembly problems that interviewees indicate are beginning to emerge in Toronto as the city's condominium neighbourhoods grow and intensify. Addressing these emerging issues should be a high priority policy and research endeavour in order to manage the long-term accumulated neighbourhood revitalisation consequences that may result from the proliferation of the condominium as a form of tenure.

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